ABSTRACT OF THE DISCLOSURE

A method and a computer program for generating a model for the functional response of a control device, for generating a manipulated variable for a controlled system in response to a preselected setpoint value is described. The model is also generated for nonlinear controlled systems by performing the following steps: calculating the Nth derivative of the controlled variable as a function of the manipulated variable and of the controlled variable itself and/or its derivatives of the nth order with respect to time and generating the model for the control device by solving the Nth derivative of the controlled variable for the manipulated variable.

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